

REMARKS

Applicant has now had an opportunity to carefully consider the Examiner's comments set forth in the Final Office Action of October 10, 2006. In this response, Applicant amended selected claims to provide a more complete scope of protection for the present invention and presents clarifying remarks believed to address the Examiner's rejections and place the claims in condition for allowance.

Applicant believes that this application is now in condition for allowance and early notice thereof is respectfully requested.

I. 35 U.S.C. §103(a) Rejections

Claims 1, 2, 7-14, 16-18, and 20-29 were rejected under 35 U.S.C. §103(a) as being unpatentable over Steinmetz (U.S. Patent Application Publication No. 2004/0021751) in view of Jones (U.S. Patent Application Publication No. 2002/0191059).

Steinmetz et al. were deemed to disclose a housing having a chamber 200 formed therein for receiving ink and a surface including an outlet passage 158 communicating with the chamber through which the ink is dispensed; and a seal member 200, having raised portions on a first surface and a second surface, wherein the surfaces are on opposite sides of the member, and the surfaces are adapted to be compressed when the seal member is installed in the outlet passage (Figures 17 and 18), when the ball is placed in the seal, the seal must be compressed to prevent leakage.

The Examiner conceded that Steinmetz et al. do not disclose the following claim limitations: an air impermeable, non-porous seal member, the seal member being formed of a rubber, polyvinyl chloride (PVC), a thermoplastic rubber, a silicone rubber, the seal member having a thin membrane extending across the first surface of the seal member, wherein thin membrane adapted to be selectively pierced by a needle of an associated printer; the seal member having a substantially disk shape, the outlet passage including a counterbore at an outer terminal end that receives the disk-shaped seal member therein, and the seal member including a thin membrane extending across an inner periphery, lower surface, of the seal member adjacent to a first surface of a seal member.

Jones et al. were deemed to disclose: an air impermeable, non-porous seal member, the seal member being formed of a rubber, a polyvinyl chloride (PVC), a thermoplastic rubber or a silicone rubber, wherein the seal member has a thin membrane extending across the first surface of the seal member, the thin membrane adapted to be selectively pierced by a needle of an associated printer, the seal member having a substantially disk shape, the outlet passage including a counterbore at an outer terminal end that receives the disk-shaped seal member therein, and the seal member including a thin membrane extending across an inner periphery, lower surface of the seal member adjacent to a first surface of a seal member.

The Examiner concluded that it would have been obvious to modify the ink container and method taught by Steinmetz et al. with the disclosure of Jones et al.

With respect to claim 1, as amended, Applicant respectfully submits that the claimed subject matter differs from Steinmetz in view of Jones.

In particular, claim 1, as amended, calls for an ink container comprising a housing having a chamber formed therein for receiving ink and a surface including an outlet passage communicating with the chamber and through which ink is dispensed. An air impermeable, non-porous seal member is received in the outlet passage. The seal member comprises a substantially V-shaped first surface having a first vertex and a substantially V-shaped second surface having a second vertex. The surfaces are on opposite sides of the seal member. The surfaces are adapted to be compressed when the seal member is installed in the outlet passage.

In contrast, Steinmetz discloses a sealing member 260 of a fluid interface 158 of an ink container 120. The sealing member includes a ball sealing portion 262 that is shaped to mate with a ball-shaped plug member 268. The sealing member also includes a needle sealing portion 264 opposite of the ball sealing portion. As shown in Figure 17-19 of Steinmetz, no surface of the seal member is substantially V-shaped having a vertex. Accordingly, Steinmetz, alone or as modified by Jones, fails to teach or even remotely suggest the limitations of amended claim 1. Therefore, it is respectfully submitted that

amended claim 1, and claims 3-14 dependent or ultimately dependent thereon, define over the prior art. Claim 2 has been cancelled.

With respect to claim 16, Applicant respectfully submits that the claimed subject matter differs from Steinmetz in view of Jones. Claim 16 recites a method of sealing an outlet port of an ink container. A generally annular-shaped seal member is inserted into a counterbore of the outlet port formed at an outer terminal end portion of the outlet port. A cap member is placed over the outer portion of the outlet port. The seal member is linearly compressed said between the cap and the outlet port. The cap member is welded to the outlet port.

Steinmetz fails to teach linear compressing of the seal member between a cap member and outlet in the outlet port. As indicated previously, and as shown in Figure 18 of Steinmetz, Steinmetz discloses sealing members 260 positioned in respective outlet passage of fluidic interfaces 156 and 158 of the ink container 120. The sealing member includes a ball sealing portion 262 that is shaped to mate with a ball-shaped plug member 268. The plug member is not a cap member which can be placed over the outer portion of either fluidic interface outlet passage. Again, the Examiner apparently concedes same (see page 6 of the Office Action, stating that Steinmetz does not disclose a cap member). The seal member is also not linearly compressed between the plug member and the outlet passage.

Further, the Examiner concedes that Steinmetz fails to teach the welding of a cap member to the outlet port of the ink container (see Office Action page 3). For that limitation, the Examiner relies on the teachings of Putman. However, Applicant respectfully submits that Putman teaches a cap 80 ultrasonically welded onto an outer end of a chimney 44 which extends from a bottom wall of an ink tank cartridge housing 10. Thus, assuming, *arguendo*, that the Putman cap can be welded to the Steinmetz ink-container lid 122, the cap would not linearly compress the seal member 260. Again, the seal members are positioned in respective outlet passage of fluidic interfaces 156 and 158. As shown in Figure 18 of Steinmetz, flanges located on the lid 122 surround each passage. Thus, no cap member can be welded to the outlet port of the ink bag to linearly compress

the seal member 260. Accordingly, Steinmetz as modified by Jones fails to teach or even remotely suggest the limitations of claim 16. Therefore, it is respectfully submitted that claims 16, 17 and 19-22 dependent or ultimately dependent thereon, define over the prior art.

Regarding claim 17, as amended, and as indicated above, Steinmetz fails to a seal member having substantially V-shaped opposite surfaces which are contacted by a cap member and an outer terminal end portion of an outlet port during compression. Therefore, it is submitted that amended claim 17, which depends from claim 16, defines over the art of record and is in condition for allowance.

With respect to claim 23, as amended, Applicant respectfully submits that the subject matter differs from Steinmetz in view of Jones.

Claim 23, as amended, calls for a seal member for an ink container comprising a lower surface and an upper surface located on an opposite side of the seal member from the lower surface. An outer sidewall extends between the lower and upper surfaces. The outer sidewall has a tapered surface extending between and connecting the lower surface and the upper surface. The upper surface has a larger diameter than the lower surface. The seal member has a substantially disk shape. The lower and upper surfaces each comprises a raised portion extending across the surfaces.

The Examiner relies on tapered surfaces of inner walls of the seal member 260 as meeting the limitations of claim 23. However, Steinmetz fails to show the seal member 260 including an outer sidewall having a tapered surface extending between and connecting the lower surface and the upper surface. Accordingly, Steinmetz as modified by Jones fails to teach or even remotely suggest the limitations of amended claim 23. Therefore, it is respectfully submitted that amended claim 23, and claims 24-29 dependent or ultimately dependent thereon, define over to prior art.

Claims 3-6 and 19 were rejected under 35 U.S.C. §103(a) as being unpatentable over Steinmetz and Jones in view of Putman (U.S. Patent Application Publication No. 2003/0081085). The Examiner stated that Steinmetz et al. as modified discloses a rib extending at least partially along a circumference of an outlet passage (Figure 17,

elements 156 and 262), a seal adapted to be linearly compressed between said cap (268) and the outlet passage.

The Examiner conceded that Steinmetz et al. as modified does not disclose a cap member having a recess for receiving the outlet passage, an outer terminal end of the outlet passage comprising a rib extending at least partially along a circumference thereof for contacting and thermally bonding the cap to the outlet passage, and the cap being formed of plastic.

Putman et al. were deemed to disclose a cap member having a recess for receiving said outlet passage (Figure 1, element 80), an outer terminal end of the outlet passage comprising a rib extending at least partially along a circumference thereof for contacting and thermally bonding said cap to the outlet passage, and the cap being formed of plastic.

The Examiner concluded that it would have been obvious to modify the ink container and method taught by Steinmetz et al. as modified with the disclosure of Putman et al.

With respect to claim 4, as amended, Applicant respectfully submits that the claimed subject matter differs from Steinmetz and Jones in view of Putman. Specifically, claim 4, as amended, requires that an outer terminal end of the outlet passage of the surface of the ink container housing comprise a generally triangular-shaped rib extending at least partially along a circumference thereof for contacting and thermally bonding the cap to the outlet passage.

The Examiner concedes that Steinmetz fails to teach the outlet passage of the ink container housing comprising a rib for contacting and thermally bonding the cap to the outlet passage (see Office Action page 6). For that limitation, the Examiner relies on the teachings of Putman. However, Applicant respectfully submits that neither Steinmetz nor Putman teaches or even remotely suggests a generally triangular-shaped rib extending at least partially along a circumference of an outer terminal end of an outlet passage for contacting and thermally bonding a cap to the outlet passage.

Conversely, with reference to Figure 5 of Steinmetz, Steinmetz discloses an ink-container lid 122 including a top fluidic interface in the form of an air-interface 156 and a bottom fluidic interface in the form of an ink-interface 158. The top fluidic interface and

the bottom fluidic interface are configured to transfer ink, air, or an ink-air mixture to and/or from the ink container 120. A circular flange extending outwardly from the lid surrounds both interfaces. Such interfaces and/or surrounding flanges are not a triangular-shaped ridge extending at least partially along a circumference of an outer terminal end of an ink outlet passage. The Examiner also relies on element 262 as also disclosing such a rib. The ball sealing portion 262 of the sealing member 260 is simply not a triangular-shaped rib.

With reference to Figure 2A of Putman, Putman teaches an outlet port 40 which depends from a bottom wall of the ink tank cartridge housing 10. The outlet port comprises a cavity or opening 42 through a pipelike member or chimney 44 which extends from the bottom wall of the housing. The opening is in communication with the chimney through an opening 36. A plurality of longitudinal ribs 46 is located along an outside wall of the chimney. A cap 80 is cured onto the outer end of the chimney, such as by ultrasonic welding. A periphery wall 86 of the cap includes a plurality of slots 88 that align with and receive the ribs 46 extending radially outward from the ink outlet port. The cap is then ultrasonically welded to the outlet end of the chimney. Accordingly, Putman also fails to teach or even remotely suggest a generally triangular-shaped rib extending at least partially along a circumference of an outer terminal end of an outlet passage. Therefore, it is respectfully submitted that claim 4 now defines over the art of record and is in condition for allowance. Moreover, claim 4 depends from claim 1 and is in condition for allowance.

With respect to claim 5, Applicants submit that Steinmetz as modified by Jones fails to teach or even remotely suggest a seal member adapted to be linearly compressed between a cap and an outlet passage of an ink container housing.

Conversely, and as indicated above, Steinmetz discloses sealing members 260 positioned in respective outlet passage of fluidic interfaces 156 and 158 of the ink container 120. The sealing member includes a ball sealing portion 262 that is shaped to mate with a ball-shaped plug member 268. As shown in Figure 18 of Steinmetz, a spring member 266 biases the plug member against the ball sealing portion to establish a fluid tight seal.

First, the plug member is not a cap member having a recess for receiving the outlet passage. The Examiner apparently concedes same (see page 6 of the Office Action). Second, the seal member is not linearly compressed between the plug member and the outlet passage. Finally, because the needle sealing portion 264, which is opposite of the ball sealing portion, is exposed and each fluidic interface includes a surrounding flange (see Figure 14 of Steinmetz), the seal member can not be linearly compressed by the Putman cap 80. Again, as indicated above, the cap 80 is connected to an outside wall of the chimney 44 of the outlet port 40. Such a cap is incapable of linearly compressing the Steinmetz sealing member 260. Therefore, it is respectfully submitted that claim 5 defines over the art of record and is in condition for allowance.

Regarding claim 19, as amended, and as indicated above with respect to amended claim 4, Steinmetz fails to teach a triangular-shaped rib located on an outer terminal end portion of an outlet passage which contacts the cap. Therefore, it is submitted that amended claim 19, which depends from claim 16, defines over the art of record and is in condition for allowance.

Applicant respectfully submits that the present amendment removes issue for appeal, or in some other way, requires only a cursory review by the Examiner. The claims do not raise any issues with regard to new matter, do not present new issues requiring further search or consideration and/or place the application into better for appeal. The amendments are of a type which should have reasonably been expected to be claimed, and in fact were claimed when dependent limitations are considered, and should not require additional searching. Accordingly, the amendment should be entered and the application forwarded for issuance.

CONCLUSION

All formal and informal matters have been addressed. For the reasons detailed above, it is respectfully submitted all claims remaining in the application are now in condition for allowance.

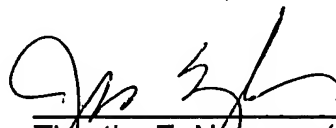
No additional fee is believed to be required for this Amendment. If, however, a fee is due, the Commissioner is authorized to charge our Deposit Account No. 06-0308.

In the event the Examiner believes a telephone call would expedite prosecution, he is invited to call the undersigned.

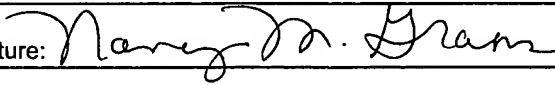
Respectfully submitted,

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Date: 12/8/06



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